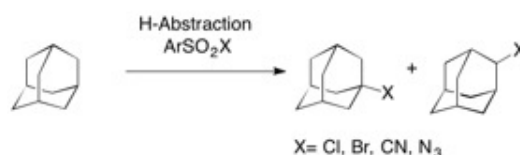


Intermolecular H-Atom Abstraction in Radical C-H Activation

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Intermolecular C-H functionalization of unactivated hydrocarbons are of great importance in the synthetic organic chemistry. Selective activation of aliphatic C-H bond can be performed using transition metal catalysis^{1,2} or radical reactions^{3,4}. Control the regioselectivity of radical mediated C-H activation is a challenging field^{5,6}.



We describe here a general approach using different kinds of highly reactive radicals to abstract the hydrogen atoms and sulphonyl reagents to trap the intermediate alkyl radicals. A strategy to control the regiochemistry by varying the abstracting radical will be presented.

[1] Wei Zhang, Nai-Xing Wang, Yalan Xing, *Synlett*, **2015**, 26, 2088–2098.

[2] Ankit Sharma, John F. Hartwig, *Nature*, **2015**, 517, 600–604.

[3] Qixue Qin, Shouyun Yu, *Org. Lett.*, **2015**, 17, 1894–1897.

[4] Megumi Okada, Takahide Fukuyama, Keiichi Yamada, Ilhyong Ryu, Davide Ravelli, Maurizio Fagnoni, *Chem. Sci.*, **2014**, 5, 2893–2898.

[5] Valerie A. Schmidt, Ryan K. Quinn, Andrew T. Brusoe, Erik J. Alexanian, *J. Am. Chem. Soc.*, **2014**, 136, 14389–14392.

[6] Ryan K. Quinn, Zef A. Könst, Sharon E. Michalak, Yvonne Schmidt, Anne R. Szklarski, Alex R. Flores, Sangkil Nam, David A. Horne, Christopher D. Vanderwal, Erik J. Alexanian, *J. Am. Chem. Soc.*, **2016**, 138, 696–702.